#### (19) World Intellectual Property Organization International Bureau



## 

## (43) International Publication Date 23 June 2005 (23.06.2005)

#### **PCT**

# (10) International Publication Number WO 2005/056776 A1

(51) International Patent Classification<sup>7</sup>:

C12N 1/21

(21) International Application Number:

PCT/KR2004/003030

(22) International Filing Date:

23 November 2004 (23.11.2004)

(25) Filing Language:

Korean

(26) Publication Language:

English

(30) Priority Data: 10-2003-0091398

15 December 2003 (15.12.2003) KR

- (71) Applicant (for all designated States except US): CJ CORP. [KR/KR]; 500, Namdaemunno 5 ga, Jung-gu, Seoul 100-095 (KR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): PARK, Young-Hoon [KR/KR]; 111-102 Mujigaedaerim Apt., Gumi-dong, Bundang-gu, Seongnam-si, Gyeonggi-do 463-703 (KR). LIM, Sang-Jo [KR/KR]; 103-1602 Dongseong 1cha Apt.,

Jukjeon2-dong, Yongin-si, Gyeonggi-do 449-845 (KR). KIM, Byoung-Hoon [KR/KR]; 205-1205 Samhwan Apt., 2danji, Mansu1-dong, Namdong-gu, Incheon 405-741 (KR). KIM, Seong-Jun [KR/KR]; 307-1001 Pungnimsinan Apt., 1235, Gwonseon-dong, Gwonseon-gu, Suwon-si, Gyeonggi-do 441-390 (KR). LIM, Ho-Soo [KR/KR]; Deokpyeong 1-2-ri, Majang-myeon, Icheon-si, Gyeonggi-do 467-812 (KR).

- (74) Agent: LEE, Duck-Rog; YEiL Patent & Trademark International, YEiLPAT Bldg., 669-17 Yorksam-dong, Kangnam-ku, Seoul 135-915 (KR).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: E.COLI MUTANT CONTAINING MUTANT GENES RELATED WITH TRYPTOPHAN BIOSYNTHESIS AND PRODUCTION METHOD OF TRYPTOPHAN BY USING THE SAME

tqaaaactttactttatqqtatcqttacqtcqtcctcqctqaqqatcaactatcqcaaacqaqc ateaacaggatcqccatcatqcaaaaaqacqcqctqaataacqtacatattaccqacqaacaqq ttttaatgactccggaacaactgaaggccgcttttccattgagcctgcaacaagaagcccagat tgetgaotogogtaaaagcattteagatattategeegggegegateetegtetgetggtagta tgtggtccttgttccattcatgatccggaaactgctctggaatatgctcgtcgatttaaagccc ttgccgcagaggtcagcgatagcctctatctggtaatgcgcgtctattttgaaaaaccccgtac gggctgcagatcgcgcgtaeattgctgcttgagctggtgaatatgggactgccactggcgacgg aagcqttagatccqaatagcccqcaatacctqqqcqatctqtttagctqqtcagcaattqqtqc aaaaacggcaccgacggcagtctggcaacagcaattaacgctatgcgcgccgccgccagccgc accgttttgttggcattaaccaggcagggcaggttgcgttgctacaaactcaggggaatccgga cggccatgtgatcctgcgcggtggtamagcgccgamotatagccctgcggmtgttgcgcamtgt gaaaaagagatggaacaggcgggactgcgcccgtctctgatggtagattgcagccacggtaatt ccaataaagattatcgccgtcag[tot]gcggtggcagaatccgtggttgctcaaatcaaagat qqcaatcqctcaattattqqtctqatqatcqaaaqtaatatccacqaqqqcaatcaqtcttccq agcaaccgcgcagtgaaatgaaatacggtgtatccgtaaccgatgcctgcattagctgggaaat qaccgatgccttgctgcgtgaaattcatcaggatctgaacggcagctgacggctcgcgtggct taaqaqqtttattatqqttqctgaattqaccqcattacqcqatcaaattqatqaqqqtqqataaa gcgctgctgaatttattagcgaagcgtctggaactggttgctgaagtg

(57) Abstract: The present invention relates to a Tryptophan-producing *E.coli* mutant strain CJ285 (KCCM-10534) containing single or multi mutant genes related with Tryptophan biosynthesis and production method of Tryptophan using the same. More particularly, DNA base sequences and amino acid sequences *aroF*, *aroG*, *trpR*, *and tyrR* originated from tryptophan producing *E.coli* mutant strain CJ285 (KCCM-10534) and related with Tryptophan biosynthesis, are disclosed, and *E.coli* CJ285 containing at least one of the mutant genes is cultivated directly in a glucose-containing fermentation medium, whereby L-tryptophan can be accumulated in the culture medium.



### WO 2005/056776 A1



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.